

Characteristic of Effective Instruction

Rigorous and Relevant Curriculum

Purpose

The purpose of this brief is to provide Iowa educators with a clear understanding of what is meant by rigorous and relevant curriculum as a characteristic of effective instruction of the Iowa Core.

Definition

A rigorous and relevant curriculum is one that is cognitively demanding and challenging to students as they apply the essential concepts and skills to real world, complex and open-ended situations. The content is not just interesting to students, but involves particular intellectual challenges. When students successfully meet these challenges, their new learning will have meaning and value in contexts beyond the curriculum unit or classroom setting.

Rigor and relevance is characterized by content that is linked to a core disciplinary concept or skill and

- Requires students to do authentic work, using methods that are specific to the discipline and applying what they know or what they are learning to solve complex problems
- Involves the use of prior knowledge, the development of in-depth understanding, and the ability to develop and express ideas and findings through elaborated communication

A rigorous and relevant curriculum requires students to use knowledge to create and apply solutions to complex, real-world problems.

Critical Attributes of a Rigorous and Relevant Curriculum

Rigorous curriculum, instruction, and assessment include the following attributes:

- **Higher order thinking (HOT) is performed by students during instruction.**
 - The instruction and the tasks presented to students require them to predict, hypothesize, justify, interpret, synthesize, evaluate, analyze, and/or generally create new levels of meaning and understanding to be successful.
- **Deep understanding and mastery of critical disciplinary concepts and skills are demonstrated.**
 - Instruction aims at students developing an integrated, holistic understanding of important concepts. Students are able to articulate issues, problems, nuances, and

different applications of important disciplinary content, rather than only fragmented pieces of information.

- **Concepts and skills are applied to situations, issues, and problems in the world beyond school.**
 - Students are asked to apply discipline specific processes to address a real world problem or complete an authentic task. In doing so, student learning is deeper and more likely to carry over to new learning. Instruction reflects an understanding—both by teachers and students—of the value of applying concepts and skills to influence an audience beyond school.

Additional Important Aspects of a Rigorous and Relevant Curriculum

- **Connections within and across disciplines are made to help develop essential concepts and skills in ways that address the complexity of real-world problems.**
 - Students are making the connections among essential concepts and skills from two or more disciplines and using those to solve complex, real-world problems. The nature of the work prompts students to incorporate concepts, discipline-specific methods, and processes from more than one discipline in order to address the complex nature of the problem.
- **Essential understandings are formatively assessed using standards, criteria, and a variety of formal and informal strategies.**
 - Learning goals are clearly defined, examples of high quality work are available, and rubrics are frequently and consistently applied.
 - To help students do well, their work-in-progress is closely monitored. They are given descriptive feedback from the teacher and one another based on the goals and criteria for the task they are completing. Examples of previous work—both strong and weak—are available to help guide their work. Teachers and students collaborate in nurturing a class climate where it is safe to take risks and receive feedback that strengthens the quality of their work.
- **The coherence of enduring understandings and culture supporting high expectations is consistent among all grade levels.**
 - Teachers who teach the same content have reached a common understanding of the nature of the essential concept or skill and the kinds of evidence one would see in student work to identify its presence. Based upon age, prior learning, and the developmental differences among students, teachers adjust the work assignments and requirements. As students move from one level of instruction to another, their knowledge of and ability to use the skills and concepts grows with continuity, becoming increasingly more complex and demanding.

Planning

Rigor and relevant instruction requires careful design and preparation.

Teacher Actions:

- Teachers ensure that instruction and tasks are developmentally appropriate and address essential concepts and skills.
- Teachers focus on critical instructional content.
- Teachers develop tasks that require students to apply concepts and skills in a real-world context.
- Teachers design tasks that are cognitively complex and require higher-order thinking.
- Teachers identify enduring understandings related to the critical concepts and skills included in their instruction.
- Teachers collaborate with one another to strengthen curriculum through interdisciplinary connections.
- Teachers carefully consider and select cognitive processes in designing instruction.

Instructing

Teachers and students take on active roles as the rigor and relevance of instruction increases.

Teacher Actions:

- Teachers serve as facilitators and coaches.
- Teachers tailor learning to meet specific student needs.
- Teachers provide descriptive feedback to students.
- Teachers gradually release control of learning over to the students.
- Teachers provide access to information, resources, experts, and technology that students will need to complete authentic tasks.
- Teachers demonstrate essential concepts or skills as needed.
- Teachers prompt students' thinking with questions about the work they are doing and the decisions they are making.
- The responsibility for learning is shared among teacher and students.

Student Actions:

- Students collaborate with their peers and adults as they engage in problem-based learning.
- Students share responsibilities for members of their learning teams.
- Students exchange ideas and points of view as they work together.
- Students strengthen their active listening skills through intelligent coherent communication.

- Students communicate in elaborated and specific ways during the development and presentation of their work.
- Students use technology to access, retrieve, and produce information.
- The responsibility for learning is shared among teachers and students.

Monitoring and Assessment

Teachers and students continually reflect on the thinking that's happening during and as a result of instruction.

Teacher Actions:

- Teachers continually reflect on students' levels of cognition as learning progresses.
- Teachers consistently apply standards and criteria to evaluate student work.
- Teachers arrange for appropriate audiences or evaluators for student work outside the classroom.
- Teachers make plans to reteach if students do not meet the learning goals.

Student Actions:

- Students self and peer analyze their work before they present to an audience.
- Students continually reflect as they engage new learning to strengthen their skills and identify areas for improvement.

Traditionally, academic rigor was most often found in college preparatory curriculum or AP courses. Students seeking relevance in their course work selected elective courses that matched their interests. But rigor and relevance are critical factors that must be prevalent in each and every student's educational experience. Partnered with the essential concepts and skills of the Iowa Core, rigor and relevance prepares students to meet future intellectual challenges.

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